

DIRECT WRITE APPROACH

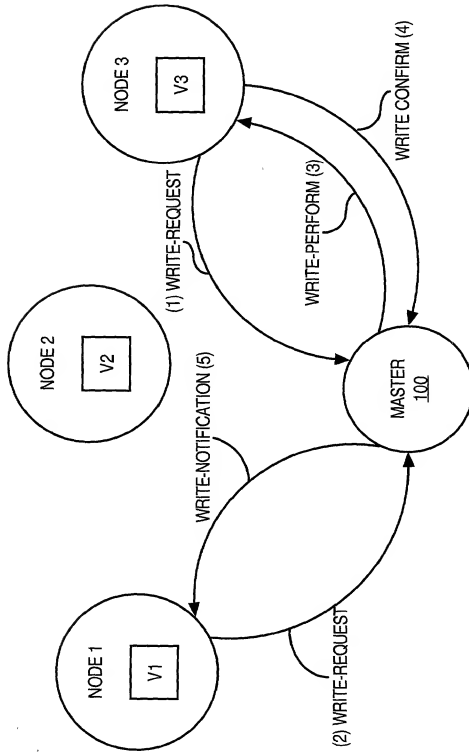
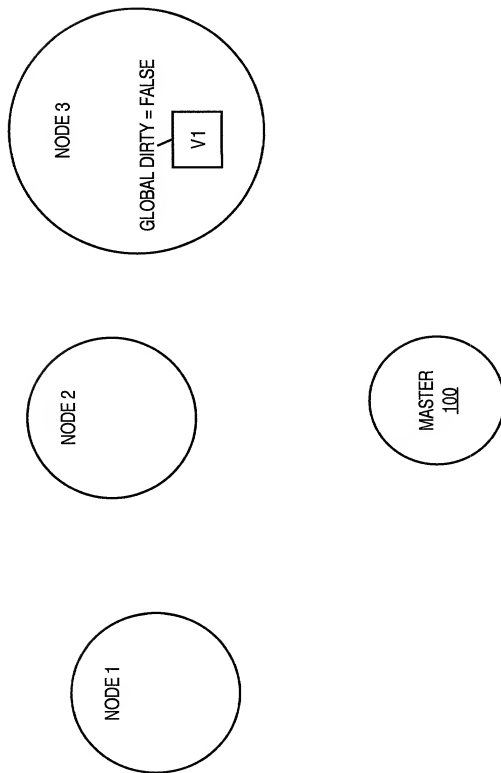


FIG. 1



OWNER-BASED WRITES WHEN GLOBAL DIRTY IS FALSE



**FIG. 3a**

OWNER-BASED WRITES WHEN GLOBAL DIRTY IS TRUE

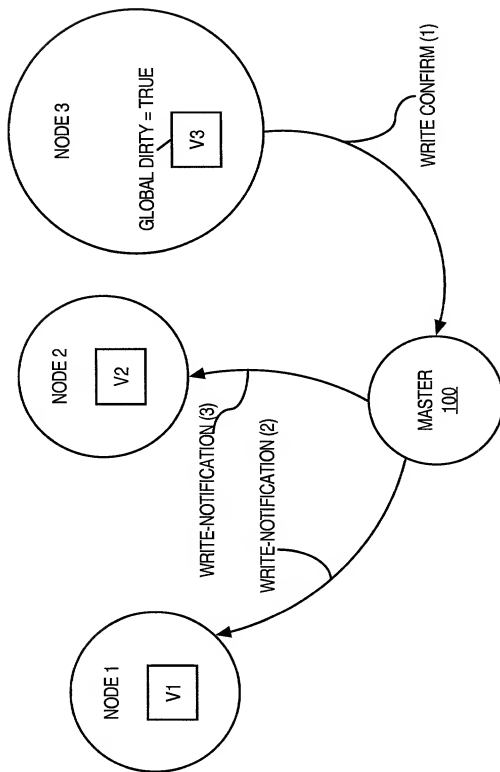


FIG. 3b

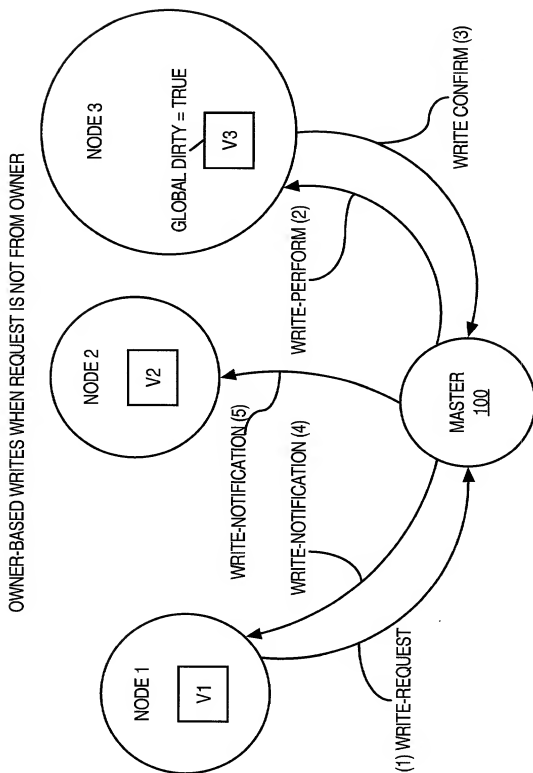


FIG. 3c

ROLE-BASED APPROACH WHEN MODE IS LOCAL

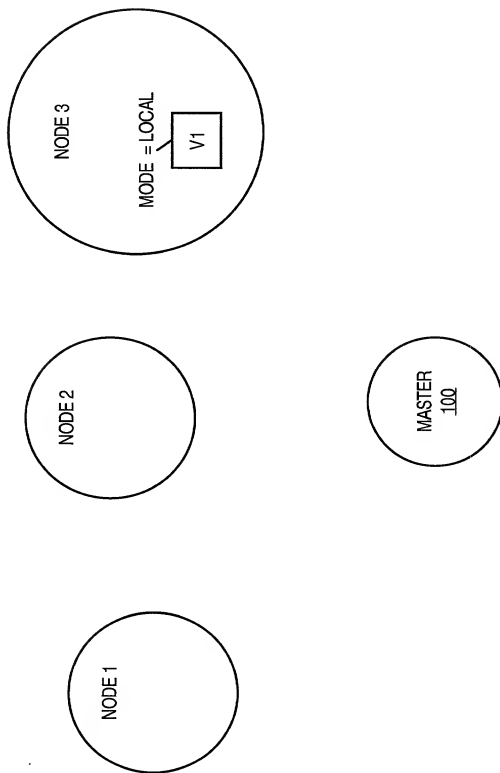


FIG. 4a

ROLE-BASED APPROACH WHEN MODE IS GLOBAL

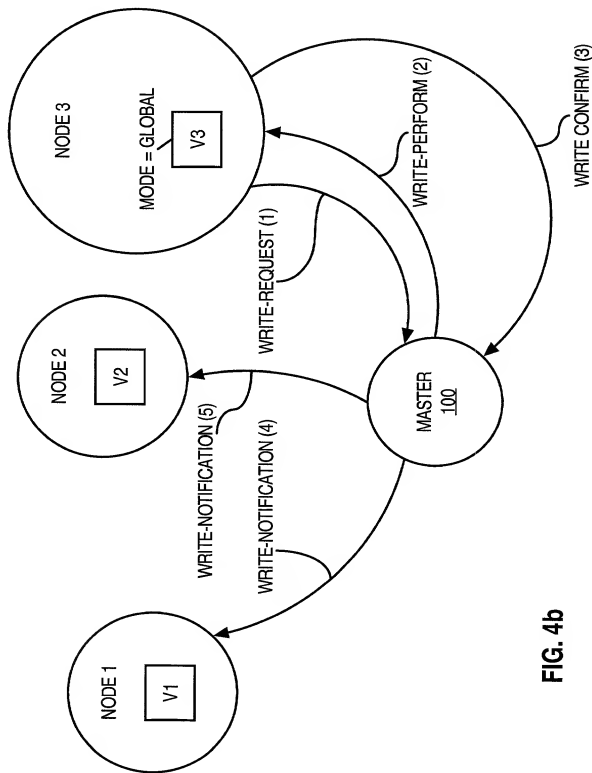
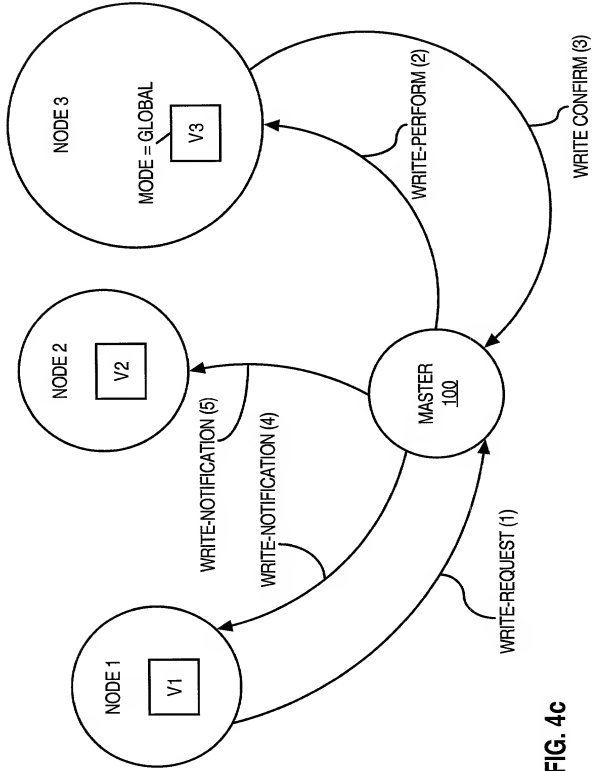


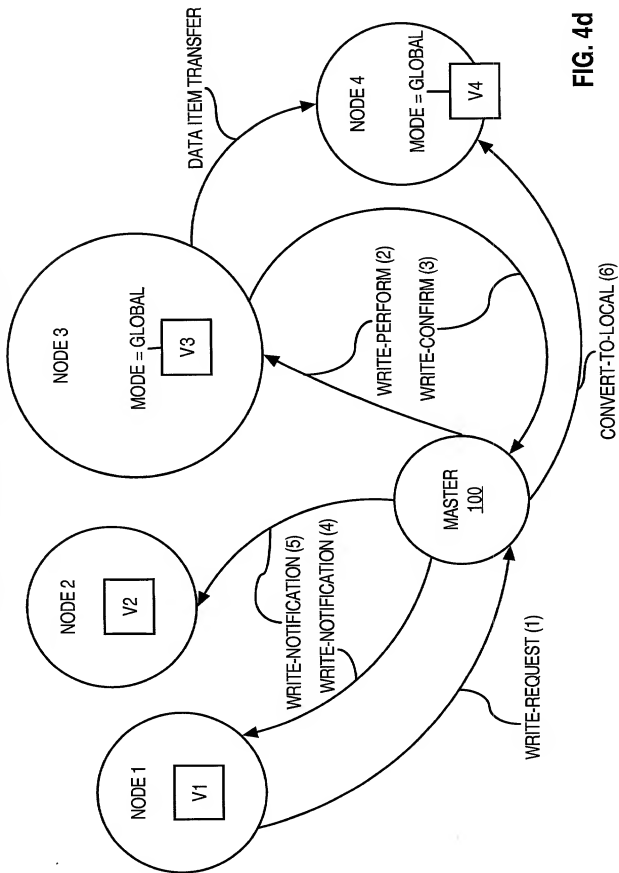
FIG. 4b

ROLE-BASED APPROACH WHEN REQUEST IS NOT FROM EXCLUSIVE LOCK HOLDER





# ROLE-BASED APPROACH WITH TRANSFER DURING WRITE OPERATION



**FIG. 4d**

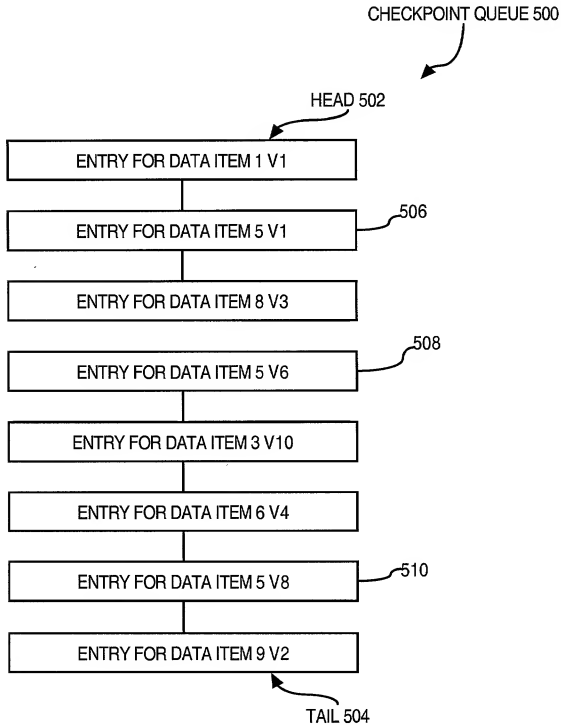


FIG. 5

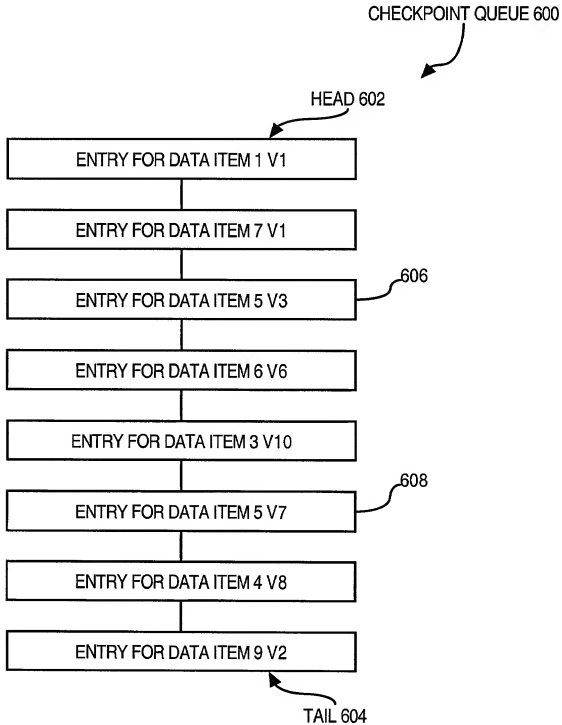
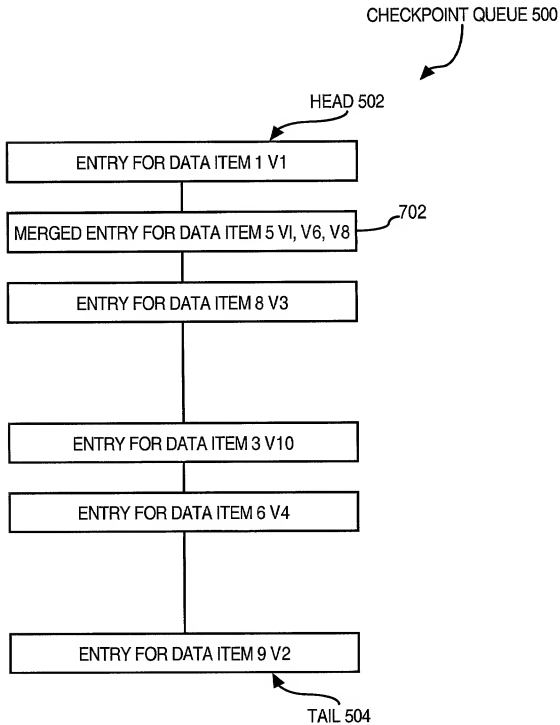
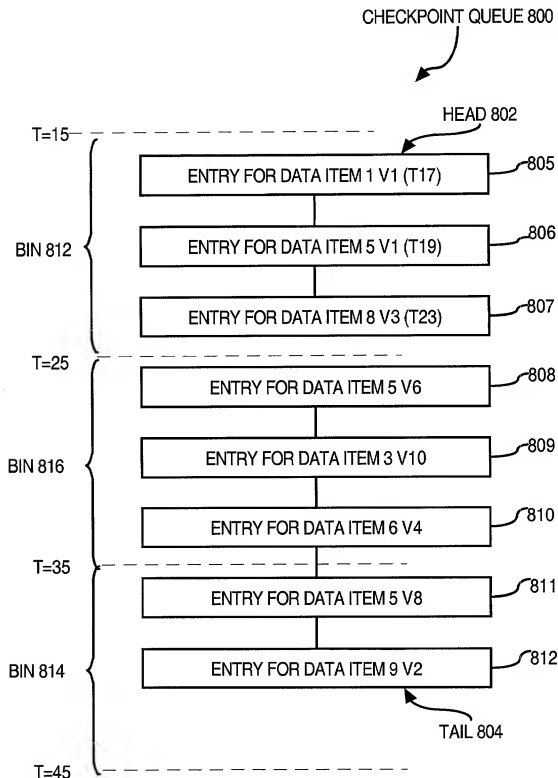


FIG. 6

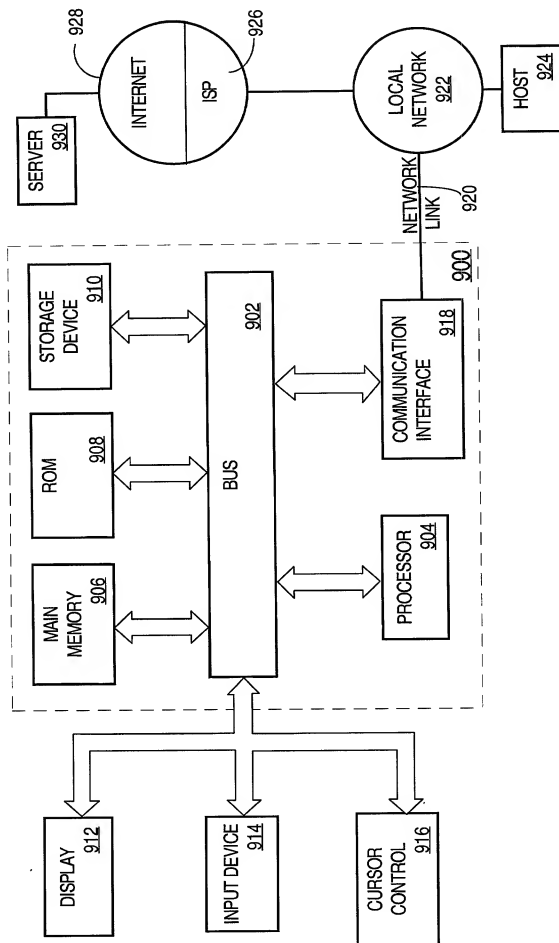


**FIG. 7**



**FIG. 8**

FIG. 9



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